THE VETERINARY RECORD

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888

No. 52. DECEMBER 24, 1949 VOL 61.

STATISTICAL RECORDS IN A.I. PRACTICE*

By

REGINALD CLARKE, B.V.SC., M.R.C.V.S.,

SOMERSET CATTLE BREEDING CENTRE

Since commencing operations on November 1st, 1944, the Somerset Cattle Breeding Centre has experienced a marked expansion. The area operated at that time was confined to a four to five miles radius around Ilminster and Taunton in South-West Somerset, and after early technical difficulties were overcome and the demands for A.I. increased, the area was extended to a radius of ten to 12 miles. Then by setting up sub-centres and later by the establishment of a second centre at Langford in the North of the county, the whole of Somerset was covered. On the appearance of A.I. calves in each area, the rate of enrolment of new members in that area increased noticeably.

Although the total membership of 5,000 represents almost a third of the milk-producing herds in Somerset, the rate of increase is still being maintained.

TABLE I

MEMBERSHIP INCREASE

Year	No. of Members	No. of First Inseminations	No. of Cows Inseminated per Member
1944	134	355 (2 months only)	2.6
1945	325	2,065	6.4
1946	1,116	7,225	6.5
1947	2,556	19,124	7.5
1948	4,325	36,750	8.5
1949	5,028 (June)	50,000 (estimated)	—

The number of cows inseminated per Member corresponds with that published by the Milk Marketing Board and also with results in Denmark and U.S.A. ; it indicates a continued active membership.

A serious outbreak of foot-and-mouth disease on the Somerset-Dorset border severely restricted the work of the Centre during the period December, 1946, to February 1947. This necessitated closing down for a period of six weeks while an order of the Ministry of Agriculture and Fisheries establishing a Restricted Area, was in operation. Semen was obtained from the Reading Centre and the service was maintained from the sub-centres in the area not affected by these restrictions. Although this interruption in the insemination of cattle in quite a large part of the area considerably reduced the number of inseminations at what is normally a peak period, it did not reduce the growth in membership. This outbreak was the main reason for the establishment of the second centre at Langford, 40 miles from Ilminster.

TABLE II

PROGRESS IN AREAS

Centre or Sub-centre	No. of First Inseminations 1944-45 (Nov.-Sept.)	1945-46 (Oct.-Sept.)	1946-47 (Oct.-Sept.)	1947-48 (Oct.-Sept.)	1948-49 (Oct.-June)*
Ilminster Centre	1,397	5,001	6,552	7,670	9,116
Castle Cary Sub-centre ...	—	154	2,945	5,698	6,634
Wells Sub-centre	—	151	2,619	4,575	5,448
Taunton Sub-centre ...	—	—	2,818	6,208	6,849
Axminster Sub-centre ...	—	—	490	4,336	4,317
Langford Centre	—	—	—	3,102	5,855
Minehead Sub-centre ...	—	—	—	—	1,198
Total	1,397	5,306	15,424	31,589	39,417

* 9 months only.

NOTE.—The above corresponds with the financial years (Oct. 1st to Sept. 30th).

TABLE III

BULL ESTABLISHMENT

Year	Sh.	Fr.	Gr.	Ayr	Devon	Jersey	Total
1944 ...	4	2	–	–	–	–	6
1945 ...	8	4	–	–	–	–	12
1946 ...	11	3	2	–	–	–	16
1947 ...	13	5	2	–	–	–	20
1948 ...	15	6	4	2	3	1	31
1949 ...	19	7	6	3	3	1	39

The centre began with two breeds only, Shorthorn and Friesian. In 1946 the demand for Guernseys arose and later Ayrshires, Devons, and Jerseys. The Shorthorn breed has remained in greatest demand, and, owing to the greater variation in semen production in this breed, the proportion of bulls kept is greater than in the case of Friesian where the quality of semen is more uniform. (See Appendix showing variation in conception rates.)

TABLE IV

NUMBER OF INSEMINATIONS PER BULL

1944	58.3
1945	172.1
1946	451.5
1947	956.3
1948	1185.5
1949 ... (estimate)	1300.0

* A paper presented at the Summer Meeting of the A-one Club at Ilminster, Somerset, on September 1st, 1949.

The above table reflects a more economic use of bulls as the work of the centre increased.

Although the value of artificial insemination obviously has been recognised by the farming community, farmers are liable to be misled regarding the success of A.I. by reports published in the farming press. The term "Conception Rate" unfortunately has come into common usage. It is not realised by farmers that this is a relative term and simply a "yard stick" for a ready comparison between Centres, their sub-centres, bulls and inseminators.

TABLE V

AVERAGE CONCEPTION RATE

1944	(two months only)	44.5
1945	... ...	58.5
1946	... ...	62.5
1947	... .	62.6
1948	... ...	63.9
1949	... (four months)	68.1

The Conception Rate as used in this country is the percentage of first inseminations which have not been reported to have returned to first services at the end of three months, and bears a certain relationship to, but is not identical with, the number of animals which calve down. In addition, it has been the custom at the Somerset Cattle Breeding Centre to extract the results of inseminations after calving, and a calving percentage has been obtained for each year since commencement. (Shown in Table VII below).

The last year for which completed records are available is 1947 during which 19,124 first inseminations were carried out, and 17,726 were due to calve within a period of up to 280 days from the end of the year, the difference being due to the "carry over" from one year to the next.

A few days before the calving date of each animal (as indicated by the centre's records) the member receives a stamped printed post-card on which he records the date of calving, sex and colour of the calf or if the animal did not conceive, etc. Results are classified as follows:—

(1) Normal calvings.
(2) Abortions.
(3) Animals reported *barren*, *i.e.*, disposed of because of inability to breed.
(4) Animals *put to bull* after failing to hold to insemination.
(5) Animals *not in calf* following an insemination and not re-inseminated whose subsequent history is uncertain.
(6) Animals classified as *casualties* or slaughtered because of accident, or disease, or reasons other than inability to breed.
(7) Animals *sold* and lost to the centre's records.
(8) Animals that *died*.
(9) Those cases in which no card was returned by the farmer.

It was interesting to compare these figures with those obtained in the previous years (See Table VII). A progressive improvement is shown which is due not only to improved technique at the centre, but also to the fact that through the maintenance of detailed records, farmers and our lay staff have a clearer picture of breeding difficulties, and thus earlier contact is made with local veterinary surgeons.

TABLE VI

CALVING RESULTS FOR 1947

(1)	Number calved ...	13,513	13,965 conceptions	16,160 known results
(2)	Number aborted ...	452		
(3)	Barren	1,737	2,195 non-conceptions	
(4)	Bulled	273		
(5)	Not in calf	185		
(6)	Casualties	143	1,566 no calving information	
(7)	Died	98		
(8)	Sold	711		
(9)	No information ...	614		
	Total	17,726		

Cards not returned	3.46%	
Animals successfully inseminated ...	86.4%	$\left(\frac{13,965}{16,160} \times 100\right)$
Animals which aborted	2.8%	$\left(\frac{452}{16,160} \times 100\right)$
Percentage of non-conceptions ...	13.6	$\left(\frac{2,195}{16,160} \times 100\right)$
No. of inseminations during 1947 ...	26,867	
No. of inseminations on animals which conceived	19,892	
No. of inseminations per conception	1.42	$\left(\frac{19,892}{13,965}\right)$
No. of inseminations per cow (*i.e.*, per insemination fee)	1.52	$\left(\frac{26,876}{17,726}\right)$

TABLE VII

COMPARISON WITH PREVIOUS YEARS' WORK

	1947	1946	1945
No. of first inseminations	19,124	7,225	2,065
Conception rate (percentage at 3 months)	62.6	62.5	58.5
Calving percentage	86.4	82.2	71.8
Abortion percentage	2.8	3.8	4.85
Non-conception percentage	13.6	17.8	28.2
No. of inseminations per pregnancy ...	1.42	1.52	1.66
No. of inseminations per cow	1.52	1.66	1.86

A remarkable feature of this table, in addition to the satisfactory overall improvement in the working of the centre, is the reduction in the percentage of abortions since 1945. This is thought to be due largely to the use of Strain 19 Vaccine, which, in 1945 was in rather short supply, but has since become widely used throughout the country.

It was noted that a large proportion of the 2,195 animals classified as non-conceptions (Table VI) had received only one insemination of the three covered by fee. This situation results in a serious reduction in the effectiveness of the centre and in the number of animals which could be got in calf.

TABLE VIII

	Barren	Bulled	Not in calf	Total
After one insemination ...	640	119	96	855
After two inseminations ...	488	84	41	613
After three inseminations ...	478	59	40	577
After more than three inseminations	131	11	8	150
	1,737	273	185	2,195

An investigation has been carried out to discover the reasons for the disposal of the large number of animals as " barren " after only one insemination. The fieldsmen of the centre visited farms throughout the whole area ; the resulting information is tabulated as follows:—

ANIMALS DISPOSED OF AFTER ONLY ONE INSEMINATION

Failed to breed to one insemination ...	24%	61% due to breeding difficulties
Returned to service after several months	21%	
Put to bull	12%	
Abortion after 3-4 months' pregnancy	4%	
Udder trouble or poor milker	17%	
Casualty as result accident or disease	10%	
Sold as reactors to tuberculin test ...	6%	
Sold fat for slaughter	6%	
	100%	

The investigation showed that farmers used the term " barren " to cover many conditions which should have been included under other headings of the original classification (see Table VI) ; this emphasises the need to obtain more precise information of the fate of animals which do not calve.

MATTERS ARISING FROM THE INVESTIGATION

Although not apparent from the tables presented, this investigation demonstrated some of the field conditions which are handicapping the full use of A.I. in its main purpose of livestock improvement. By far the largest amount of wastage of potential dairy animals occurs where herd management is poor. This is often associated with herd infertility although also observed in herds where management is above average.

Herd infertility is the most serious problem affecting the results of an established A.I. Centre. In diagnosis careful examinations must be carried out frequently, and it is regretted that the hard-pressed veterinarian is not able to spend as much time on these herds as he would wish. Treatment of herd infertility requires prolonged effort and may give less reward in relation to the time spent.

Animals which return to service after a varying period of some weeks or months following insemination present a troublesome problem. Undoubtedly conception has taken place in most cases but the developing embryo dies and is re-absorbed or aborted. Only one or two animals in a herd are usually affected but it occurs sufficiently often to cause some concern.

Oestrus in pregnant animals occurs more commonly than is generally realised, and the insemination of cattle already in calf unfortunately does occur. As it is contrary to veterinary ethics in this country to instruct inseminators in pregnancy diagnosis, the centre must accept the difficulty, and the farmer the responsibility. In many cases the embryo is not disturbed and the cow calves down normally, but pyometra and abortion are the usual sequel: practically all cases of uterine infection following insemination are due to penetration of the pregnant uterus. It is apparent that the uterus of the normal healthy cow in oestrus can withstand a considerable degree of infection.

SUMMARY

1. The development and results of A.I. in cattle in Somerset over a period of five years have been described.

2. The degree of variation between the so-called " Conception Rate " and actual calvings was found to be 9·2 per cent.

3. In 1947 the calving percentage was 86·4.

4. An endeavour has been made to disclose the subsequent history of animals which failed to breed to A.I., with particular reference to animals disposed of after only one insemination.

5. Matters arising from the investigation were discussed.

Appendix

THE DIFFERENCE BETWEEN CONCEPTION RATE AND CORRESPONDING CALVING PERCENTAGE FOR 1947

Bull	No. First Inseminations	Conception Rate at 3 months	Calving Percentage *	Percentage Difference
SHORTHORN :				
EMF	2,444	63.5	55.2	
WLY	1,928	65.0	56.5	
SLC	1,863	63.9	55.1	
EMC	1,827	59.3	49.5	
FBK	868	66.0	58.1	
HPG	751	58.6	49.6	
LWK	486	51.0	42.9	
MLF	392	54.3	43.2	
Purchased Sh. ...	170	67.0	56.6	
BWI	166	72.9	60.9	
GWB	111	53.2	41.7	
Total Shorthorn ...	11,006	62.2	53.3	8.9
FRIESIAN :				
LW	2,106	67.0	58.4	
KD	1,355	57.3	47.4	
CPW	816	67.3	58.2	
RJ	609	61.6	53.2	
BF	410	67.8	61.3	
Purchased Fr. ...	99	64.6	54.1	
Total Friesian ...	5,395	64.0	55.2	8.8
GUERNSEY :				
HD	1,467	62.1	51.1	
BPD	1,224	59.9	48.5	
Purchased Gr. ...	30	73.3	56.7	
Total Guernsey ...	2,721	61.2	50.0	11.2
Purchased Devon ...	2	100.0	50.0	
Combined Total ...	19,124	62.6	53.4	9.2

* First inseminations only.

The calving percentage of first inseminations in 1947 was 9·2 per cent. lower than the Conception Rate ; similar results were obtained in the previous two years. The percentage difference has been slightly higher in Guernseys than in Shorthorns and Friesians. The overall calving percentage shown in Tables VI and VII was 86·4 per cent.

SOME OBSERVATIONS ON PLANT POISONING IN GRAZING ANIMALS *

By

C. M. EDWARDS, B.V.Sc., M.R.C.V.S.,

MINISTRY OF AGRICULTURE VETERINARY LABORATORY, BANGOR

Every veterinary surgeon engaged in rural practice probably is familiar with a number of plants which are known to be highly dangerous if ingested by farm stock. Sooner or later he is certain to encounter a case which he will attribute to the action of one or other of them on the animal which he has been called upon to treat. These are the so-called poisonous plants, and although the action of many of these is a well-defined clinical entity, there are others which are only potentially poisonous, and whose actions are less constant. It is very difficult to draw the line as to which plants are in reality poisonous, and which are harmless, because, given the correct conditions, even those plants which are generally regarded as being harmless can, theoretically at least, become harmful. It will therefore be realised that management within the animals' environment becomes an important factor in the etiology of plant poisoning. This is true of the most deadly of our poisonous plants, and also of the least harmful of those which are only potentially poisonous.

By instinct, animals are highly selective in their grazing habits—one has only to observe the behaviour of sheep and cattle on reseeded pasture to realize this. When they ingest toxic plants, they probably do so because they are in search of some dietetic ingredient which is absent from the other forms of vegetation surrounding them. In order to obtain this ingredient they have to eat the only form available which unfortunately happens also to contain something harmful. Their urging quest for the factor that is lacking is greater than the instinct which repels the animals from the dangerous plant. The actual ingestion is by design, and not by accident. It is probably unlikely that the ingestion of truly poisonous plants by accident, in any quantity, ever takes place: in the grazing animal. It is the poisonous nature of the plant which is accidental, as far as the animal is concerned, and not its ingestion. The problem of vegetable poisoning in animals thus becomes an ecological one, and there is a wide field for research and investigation on this aspect.

There is evidence to suggest that in the animal there exists a receptive state, accompanied by lowered body resistance, and probably a depraved appetite. This receptive state is well recognised in relation to affections caused by the lower plants or bacteria, and by analogy merits consideration where the higher plants are concerned. Botanists and veterinarians are also convinced that the toxicity of the plants themselves can vary. The analogy can be extended further to the varying virulence of bacteria and toxin production. When the receptive state in the animal coincides with the most toxic stage in the plant, then conditions are ideal for acute poisoning to take place.

It is known that toxic herbage contains its greatest concentration of poisonous material during periods of drought. During such periods also, animals are likely to develop deficiencies and depraved appetites. During the late hot summer of 1947 there was an abundance of ragwort growing along the north-west coastal area of Anglesey. The grass was scanty and scorched in patches, but ragwort seemed to thrive. Cattle—young cattle in particular—were driven to eat the ragwort: a thing they had not been observed to do during normal years. Having once acquired a taste for the plant, they developed a craving. The result was an epidemic of ragwort poisoning with a death-rate of up to 100 per cent. among young grazing animals on some farms. Here apparently the most toxic stage in the plant had occurred at the same time as the receptive state in the cattle. This year again it appears that there is to be a repetition of the occurrence in the same area. An outbreak was investigated only yesterday. Starvation will lead to a voracious appetite, and cause an abnormal amount of food material to be eaten when this becomes available. In large amounts, therefore, comparatively harmless plants can become harmful, either by mechanical impaction, or by interference with ruminal function and the production of large amounts of gas. This is seen in clover poisoning, and over-eating on aftermath. It is believed that hydrocyanic acid is produced by clovers and this, when present in sufficient quantities, interferes with the mechanism of digestion, and causes bloat.

An unusual case of this nature came to our notice during the spring in the form of oak-leaf poisoning in sheep. A flock of ewes, heavy in-lamb, had been grazing on lowland pasture where the grass was very short. They had, in fact, on the owner's admission, been for a week on a semi-starvation diet. One morning, during the last week in April, they were turned on to a large area of rough land, where oak trees had been felled four years previously. The stumps were liberally sprouting young oak shoots. By the following morning, eight of the ewes were dead and three others were ill, showing symptoms of bloat, and the accompanying distress. These three responded to purgative and carminative treatment. A careful botanical survey of the area showed that no other poisonous, or potentially poisonous, plants had been eaten, but there was ample evidence that the young oak leaves had been grazed liberally. Their succulent nature, and the absence of other fresh vegetation, explained why. In a semi-starved state, therefore, these eleven sheep, and possibly others, had over-eaten, with resulting oak-leaf poisoning. It was learned that other sheep farmers in the neighbourhood had grazed sheep successfully on young oak shoots, and, indeed, by them it was a recognised method for killing off the old tree stumps where trees had been felled.

An outbreak of *Equisetum* poisoning occurred in cattle which were turned out for the first time after a six-week period indoors during the severe winter of 1947. They made for some marshy ground, where the only vegetation growing at that time was *Equisetum palustris*. This was very early in the spring, and during its early seasonal growth *Equisetum* is particularly succulent: later it becomes fibrous and unappetising. The cows were attracted to something green and ate profusely of the plant. One cow died and another was comatose for several days and died eventually. A third cow aborted. Symptoms were hyperexcitability—almost amounting to frenzy—with much bellowing. Then there followed inco-ordination of movement, and sudden collapse, diarrhoea and eventually recumbency and prostration.

There is strong evidence to support the view that a susceptible state exists in the animal for bracken poisoning to occur. Usually, the susceptible age group is

* Presented to the North Wales Division, N.V.M.A. ("Clinical Forum" meeting), Llangollen, June 30th, 1949.

18 months to two years, that is, young growing cattle. During this stage in growth, the demands of the body are high, and a varied diet is necessary. When young cattle are turned out to graze hill or marginal land, they are often driven to eating bracken because of the scarcity of other vegetation, particularly grass. This becomes a habit and a vicious circle is set up. Some authorities believe that an actual deficiency of thiamin is the factor leading up to bracken poisoning. Claims to have cured clinical cases of this disease by the administration of thiamin, must, at the moment, however, be regarded with a certain amount of reserve.

Incidentally, it would be interesting to make a survey of the occurrence of bracken poisoning in cattle, in relation to the extension of reseeding of hill land. Pathological conditions arising from the direct grazing of reseeded pasture must, in a broad sense, be regarded as forms of vegetable poisoning. We have recently encountered a severe outbreak of hypomagnesaemia in ewes, grazing exclusively on reseeded land, and also a peculiar osteodystrophic condition in rams kept on a similar type of pasture. The ecology of the animal on reseeded pasture is an *important* problem, and one which must be regarded with urgency and respect. It is well known that sheep and cattle show preference for old pastures, containing so-called weeds, over new leys when they have access to both.

The affinity for yew during the winter months, and the consequent almost exclusive incidence of yew poisoning during this season, must be regarded as another form of craving—probably for green food when little is available. Similarly, the eating of *Oenanthe crocata* tubers dug out of ditches can be regarded as an attempt to satisfy a quest for "something from the earth." We have observed recently that yew is not in reality as toxic for cattle as it is generally regarded. During last winter, over a period of six weeks, various individual cows on one farm sporadically showed a drop in milk yield to practically nil. Accompanying symptoms were inco-ordination of movement and slight tympany. There were no deaths, and recovery took place in two or three days—often without treatment. These cows were being wintered out, with shelter available in open sheds. The affection was connected with one particular field, and a botanical survey revealed the presence of a small yew tree in the hedge. There was ample evidence that this had been browsed by the cows. Since then we have heard of similar occurrences in at least two other herds. It is possible therefore for yew to be relatively non-toxic, or that cattle can develop a resistance against its toxic action by the ingestion of repeated small doses of the plant.

It is hoped that these, possibly controversial, views on the subject of plant poisoning will at least provide means of stimulating study. The writer does not profess to be an authority on this problem. The observations are based on the investigation of a modest number of varied cases which he has been fortunate enough to encounter.

COMPANY OF FARMERS DINNER

The Lord Mayor of London attended the annual dinner of the Company of Farmers at the Goldsmiths' Hall on Thursday of last week. The Master, Lord Courthope, presided. Replying to the toast of "The Company," Lord Courthope said the majority of its members were farmers, and they appealed to the Court of Aldermen to grant them a Livery, as they wanted to start the training of skilled agriculturists.

EXPERIMENTAL TOXICITY OF SODIUM FLUORIDE

By

R. J. GARNER, M.A., M.R.C.V.S.,

Vom, N. Nigeria

Sodium fluoride is widely used for the treatment of ascariasis in pigs. On its introduction to the Veterinary Stock Farm, Vom, for this purpose, attention was drawn to its possible danger if allowed to enter wounds in the skin. Pease (1937) states that "if sodium fluoride enters a break in the epidermis it causes progressive death of tissue which may result in the necessity to amputate." No reference to such an action could be found in any of the dermatological text-books available, but in view of the possibly serious consequences which might follow careless handling of the drug, it was felt that some investigation was called for.

Guinea-pigs were chosen as experimental animals. In one group, consisting of four animals, scarifications were made on each side of the back, the wound on one side serving as a "control," whilst sodium fluoride was rubbed into that on the other. A second group, comprising three animals, had wounds simulating abrasions, and these were treated in the same way.

In every case, within 24 hours, the fluoride-treated wound showed a central necrotic area surrounded by a zone of inflammatory oedema. In surviving animals, the inflammation subsided after five to ten days and the necrotic centre sloughed off after a period varying from seven to 14 days, revealing a clean, healthy wound. In the first group, the control wound healed completely, leaving no scar, after six, seven, seven and seven days and the wounds treated with sodium fluoride after 20, 22, 27 and 29 days respectively. In the last case only was any residual scar apparent. Of the second group, one animal was found dead on the morning of the seventh day and another on the eleventh day. In neither case had the control wound healed completely. On *post-mortem* examination, in both cases the necrosis and inflammation involving the fluoride-treated wound were found to be confined to the dermis, the underlying tissues being unaffected. No evidence of toxaemia was apparent and it was considered that death was probably due to exposure to cold. (It has been found here that guinea-pigs in a weakened condition due to any cause are extremely susceptible to a sudden fall in temperature.) The control wound of the surviving animal healed on the ninth day and the treated wound on the 18th day, leaving no residual scar.

No special precautions were taken in handling the drug other than thorough washing of the hands. Despite the presence of several superficial wounds on the tips of the fingers of one hand, no adverse effects were observed.

These findings suggest that, although sodium fluoride may cause local necrosis if it enters a wound in the epidermis, only reasonable precautions need be taken by those handling it. Pease recommends the application of strong carbolic acid followed by neutralisation with alcohol. The efficacy of this antidote has not been checked.

I have to thank the Director of Veterinary Services, Nigeria, for permission to publish this note.

Reference

Pease, D. (1937.) *J. Bacteriol.* **33.** 619.

CLINICAL COMMUNICATION

FRACTURE REPAIR BY BONE PINNING

J. S. J. LAUDER, M.R.C.V.S.,
ALTRINCHAM, CHESHIRE

No doubt many practitioners will have utilised the intramedullary method of bone fixation after having heard the papers on the subject at this year's congress. Having been impressed by the possibilities offered by this method I feel that the following cases may prove of general interest.

CASE 1: *Subject.*—A cross-bred mongrel dog, aged nine months. As a result of a road accident this puppy received a badly displaced fracture of the tibia and fibula.

Technique.—Nembutal anaesthesia was administered; with strict aseptic precautions an incision was made on the medial aspect of the leg over the fracture site, and the fractured ends of the bones were exposed. A Steinman pin of suitable size was inserted into the medullary cavity of the proximal end of the tibia, and pushed up the medullary cavity until it emerged lateral to the patellar ligament. The inserting chuck was then applied to the proximal end of the pin which was pulled right up until only a quarter of an inch was visible at the fractured end, when the distal end of the fractured bone was placed in apposition and the pin was reinserted down the cavity until it reached the compact bone at the distal end. The portion of pin protruding at the knee joint was sawn off and the incision sutured. The main incision was then dusted with sulphathiazole and sutured with nylon.

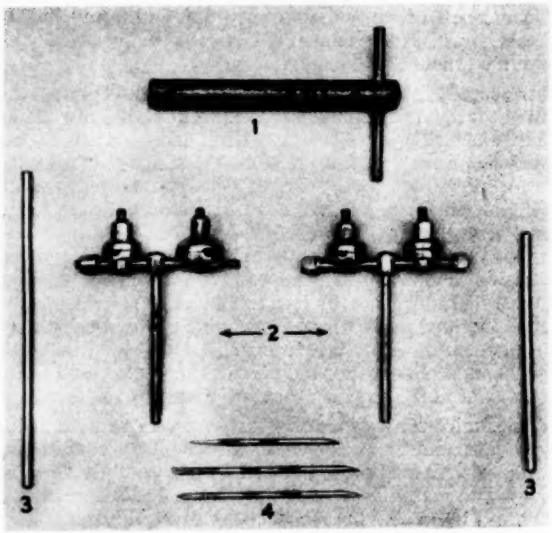
After treatment.—Daily injections of 500,000 units of penicillin were given, and the dog's temperature remained normal throughout. First intention healing resulted, and the dog was discharged a week later, walking sound with the pin still *in situ*. X-ray examinations revealed perfect apposition and commencing callus formation. The patient was seen seven weeks later when the leg was perfectly normal and the pin was removed.

CASE 2: *Subject.*—A cross-bred dog aged seven years which had been involved in a car accident. X-ray examination revealed a badly comminuted fracture of the upper third of the femur, with extensive displacement of the fractured ends. As a matter of experiment I decided to use an ivory pin as utilised in human surgery.

Technique.—The animal was anaesthetised with nembutal, and an incision made on the lateral aspect of the thigh over the fracture site. The muscles were separated and the fractured femur exposed. After the comminuted fragments of bone had been removed, one end of the pin was inserted as far up the medullary cavity of the proximal fragment as possible. The distal portion was then pushed on to the pin. This appeared to produce a satisfactory union. Sulphathiazole was dusted into the wound which was then sutured with nylon. Injections of 100,000 units of penicillin were given twice daily, and first intention healing resulted. After ten days it was found that another piece of bone had become detached allowing the pin to become dislodged.

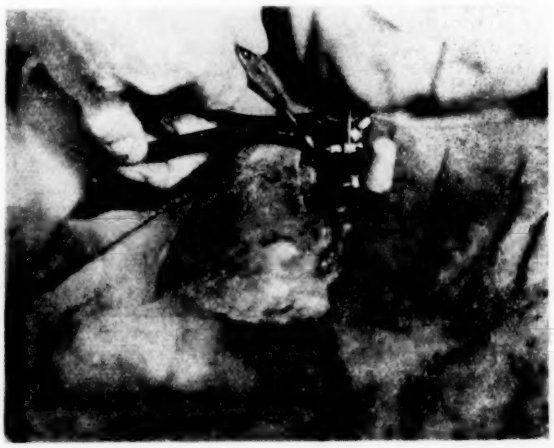
After a chance conversation with a dental colleague, I decided to use a similar type of external fixation to the Ehmer Kirschner splint—the Clouston Walker jaw-pinning apparatus. By open reduction specially adapted screw-ended pins were screwed into the fractured fragments—one into the proximal end and two into the distal end of the bone—and the pins connected externally by means of a long connecting rod. Two days later the proximal pin worked loose. This was replaced and another week elapsed before two pins again worked loose.

Finally a 6½ inch stainless steel Steinman pin was inserted from the trochanteric fossa right down to the distal end of the medullary cavity. Once again first intention healing resulted, and a fortnight later the dog was discharged with a sound leg. I am hoping at a later date to remove the pin.



CLOUSTON WALKER APPARATUS

1. Tommy Bar.
2. T-pieces with buckles.
3. Metal rods for connecting T-pieces.
4. Pins for inserting into bones and attachment to buckles.



CASE 3: *Subject.*—A mongrel, aged 14 months. There was a badly displaced fracture of the radius and ulna. Normal reduction and casting with Gypsona plaster bandage was adopted in the first instance but as the dog persisted in removing this cast it was decided to apply a Clouston Walker jaw-pinning apparatus. An incision was made over the fracture site to expose the bone and two pins were drilled into each end of the fractured radius while two more pins were inserted into the proximal end

of the ulna. The six pins were then connected together by long connecting rods. Up to the moment of writing the dog is still in hospital but strong callus formation is present and it is hoped to remove the apparatus in a week or so.

As a result of these cases I have come to the conclusions, first, that the ivory pins as used in human cases prove too flexible in the long bones of the dog ; secondly, that in the Clouston Walker outfit we have a light, small and compact apparatus that in certain cases will prove a useful substitute for the Kirschner splint. The resistance to infection, aided by penicillin, that these cases exhibited is remarkable, more particularly when one considers that in case two the fracture site was opened and reopened four times and first intention healing resulted every time.

In the past, fractures of the femur and pelvis always have proved very difficult and unsatisfactory to deal with ; I feel that these methods offer great possibilities, and I would welcome contributions on the subject from other practitioners.

I must acknowledge the valuable assistance rendered to me by A. W. Moule, Esq., F.D.S., F.R.C.S., and my assistant Miss A. M. Smith, M.R.C.V.S.

ABSTRACTS

[Allergy and Antihistamine Therapy in Veterinary Practice. Rawson, G. W. (1949) *J. Amer. Vet. med. Ass.* **114.** Pp. 239-241.]

This paper gives data on the use of pyribenzamine in domestic animals, and no comparison is made with any of the other antihistaminic substances. The theory of allergy in domestic animals and the association of histamine production with the train of symptoms is discussed.

A section on the administration and dosage of pyribenzamine recommends oral treatment in small animals, since the use of the intravenous route may produce acute hypotension or even cerebral shock.

Large animals such as horses and cattle are best treated by intravenous injection. The dosage for dogs is from 25 to 75 mg. at intervals of two to three hours. In the larger animals doses of 200 to 600 mg. can be given according to the age and weight of the animals. Intravenous inoculations should always be given slowly. In large animals there may be temporary symptoms during the treatment—such as nervousness, salivation, bellowing in cattle, champing of the jaws—but these symptoms usually subside in ten to 25 minutes.

Cats should not be treated with antihistamine drugs until further investigation has been carried out. In dogs pyribenzamine has been used with varying degrees of success in the treatment of allergic dermatoses, urticaria, pruritus, etc. Asthmatic conditions, with or without coughing, also respond to treatment.

The use of pyribenzamine in ointment form is suggested as an adjuvant to oral administration in cases of severe pruritus.

Antihistaminic therapy is recommended in cases of anaphylactic shock, especially in patients that have become sensitised to heterogenous sera.

In horses and cattle a considerable range of apparently allergic conditions have been treated with pyribenzamine. The list mentions severe diseases which are not generally considered to be allergic in origin. Diseases mentioned are laminitis, azoturia, food poisoning, pulmonary oedema and emphysema, retained placenta, ulcerative stomatitis, diarrhoea, chronic mucopurulent conjunctivitis, urticaria, septic metritis, and tympanites.

Three tables are included which give the results of treatment in small and large animals.

The drug appears to be most effective in small animals in cases of eczema, urticaria, and asthma. In the large animals laminitis, azoturia, retained placenta and septic metritis are recorded as responding to treatment with pyribenzamine in a percentage of cases.

[The information contained in this paper is sufficient to indicate that the antihistaminic drugs will have their uses in veterinary practice, but at the moment they can be used only symptomatically until more detailed information on treatment is available.]

G. C. B.

* * * * *

[A Note on the Cause of Tall Fescue Lameness in Cattle. Cunningham, I. J. (1949). *Austr. vet. J.* **25.** 27-28]

A condition is described which resembles ergot poisoning. The symptoms develop ten to 14 days after the cattle are grazed on areas infested with tall fescue grass (*Festuca arundinacea*). Reasons are given why this condition is not due to infection of the fescue with ergot sclerotia. Further, the characteristic lameness has been produced experimentally by feeding dried fescue free from ergot sclerotia. Attempts to cause lesions in laboratory animals have been unsuccessful. It is suggested that the fescue be eliminated from pastures or, since one week's grazing is necessary to produce symptoms, grazing of infested areas should be limited to one week.

F. A.

* * * * *

[Canine Eczema. Scharf, A. & Slanetz, C. (1949.) *N. Amer. Vet.* **30.** 376-378.]

Eczema of unknown causation frequently is dietetic in origin, and often is associated with inability of the subject to assimilate vitamins A and E, choline, etc. Soya lecithin seems to have a strong lipotropic effect ; moreover, it is rich in essential unsaturated fatty acids and promotes the absorption of vitamin A.

The authors fed a commercial preparation " lecipet " to about 100 dogs, and case histories are given for eight suffering from dry eczematoid conditions characterised by dandruff, alopecia and scaly dermatitis. The rate of feed was ½ oz. daily over a period of six weeks, at the end of which all the recorded cases showed not only marked improvement of the skin but an over-all increase of weight and general health.

J. P.

"Britrail," followed by the name of the town, is to be the telegraphic address of all British Railways' offices on the Continent as from January 1st ; existing telegraphic addresses will be cancelled on that date.

* * * * *

Weekly Wisdom

Seasonable Reminder

When I took a schoolboy to a film show and he saw the re-issue of an old slapstick film, he stared and rocked in ecstasy. What shattered him was the unexpected discovery of an uproariously comic world. We could all do with a generous helping of it. I offer my assistance here and now for a grand political slapstick film, with custard pies and bags of flour overwhelming a conference. J. B. Priestley, in "The New Statesman."

REVIEW

[**Photoelectric Methods in Clinical Biochemistry**. By G. E. Delory, M.Sc., Ph.D., Assistant Professor in Biochemistry, University of Manitoba, with a foreword by Professor E. J. King, M.A., Ph.D., D.Sc. London: Hilgar & Watts, Ltd., 98, St. Pancras Way, Camden Road, N.W.1. Pp. X + 90. Price 15s.]

This extremely useful publication, by one who during the past decade has done much to develop the application of photoelectric methods to clinical biochemical estimations, will be widely used in veterinary as well as in medical laboratories. It has been published by the firm responsible in this country for the manufacture and sale of the twin-cell (H560) "Spekker" Absorptiometer and of the new and popular single-cell "Biochem" Absorptiometer. These two instruments are described, and some notes are appended also upon the recent H760 version of the former. Details are not, of course, provided of other makes upon the market, but it would in most instances be possible to modify the procedures described to render them applicable to other instruments. The principles of colorimetry are set out and detailed consideration is given to the selection of filters.

The following estimations are described in complete detail: bilirubin in plasma ; calcium in serum ; cholesterol in blood ; creatinine in blood ; creatinine and creatine in urine ; haemoglobin in blood ; 17-ketosteroids in urine ; non-protein nitrogen in blood ; alkaline phosphatase in plasma ; acid phosphatase in plasma ; inorganic phosphate in blood ; inorganic phosphate in urine ; potassium in serum ; potassium in urine ; proteins (total globulin, globulin excluding fibrinogen, albumin and fibrinogen) in plasma ; sodium in plasma ; sugar in blood ; sulphonamides (sulphanilamide, sulphapyridine and sulphathiazole) in blood ; urea in blood ; and uric acid in urine. This selection is based upon common requirements in medical biochemistry, but there is no difficulty in adapting the instruments to colorimetric procedures, *e.g.*, ketones in blood and urine, or vitamin A and carotene in blood, that are more frequently in use in veterinary laboratories.

The author and publishers are to be congratulated upon having brought together in one slim volume such a wealth of directly applicable data. The style is succinct but lucid and the instructions can readily be followed by technicians who possess the requisite training.

APPEAL FOR SCIENCE EQUIPMENT

An appeal for funds and materials is made by Dr. Jaime Torres Bodet, Director-General of Unesco, in a preface to a pamphlet, "Science Laboratories in Need," published by the Stationery Office (9d.). The pamphlet describes the vast losses through destruction or looting during the war of technical equipment in universities, technical colleges, and secondary schools in Europe and Asia. Dr. Torres Bodet points out that even before war had destroyed tens of thousands of schools and sacked or demolished thousands of libraries, museums and laboratories, probably not more than one quarter of the world's population had even a rudimentary grasp of science, history, geography and the arts. Only half of the human race could read or write.

* * * * *

The Ministry of Food has informed 10,000 small shopkeepers who complained that dirty ration books are the biggest menace to food hygiene that steps are being taken to meet this danger. In a letter to the National Union of Small Shopkeepers, the Ministry states that arrangements have now been made for dirty books to be exchanged free of charge at local food offices.

REPORT

[**Colonial Research Council.**—Annual Report on Colonial Research (1948-1949): **Committee for Colonial Agricultural, Animal Health and Forestry Research.**—Fourth Annual Report.]

The Committee record with deep regret the death of their Chairman, Sir John Fryer, K.B.E., M.A., F.R.S., on November 22nd, 1948.

During the year Mr. T. Dalling, M.A., M.R.C.V.S., F.R.S.E., Director, Veterinary Laboratory, Ministry of Agriculture and Fisheries, and Dr. C. D. Darlington, D.Sc., F.R.S., Director, John Innes Horticultural Institution, resigned from the Committee on completion of their three-year terms of service. Dr. Bell, Professor Beveridge, Dr. Cheesman and Dr. Hall accepted invitations from the Secretary of State to become members of the Committee for three years. Dr. H. H. Storey, C.M.G., Ph.D., F.R.S., relinquished the duties of Secretary in September, 1948, on appointment as Deputy Director of the East African Agriculture and Forestry Research Organisation. The Committee desire to place on record their appreciation of the valuable services rendered by Dr. Storey and their welcome to Dr. Herklots, who succeeded him on October 1st, 1948, as Secretary to the Committee and as Secretary for Colonial Agricultural Research.

During the year 1948-49 the Committee held six meetings. The informal consultative panels, including specialists who are not members of the Committee, which were established during the year previous to that under review, have given valuable advice on several problems and research projects. The Committee record their great appreciation of the time and attention given to this work by those who served on these panels during the year. Members of these panels are: Mr. F. C. Bawden, Sir Daniel Cabot, Mr. T. Dalling, Professor F. G. Gregory, Mr. E. C. Lloyd, Professor W. C. Miller, Professor Macgregor Skene, Mr. J. Smith, Sir Harold Tempany, Professor D. Thoday, Professor T. Wallace and Dr. V. B. Wigglesworth.

An African Rinderpest Conference was held in Nairobi in October, 1948, to consider the control and eradication of rinderpest in Africa. This was immediately followed by an International Rinderpest Conference under the auspices of the Food and Agriculture Organisation of the United Nations to consider the international aspects of the African Conference and the financial implications of the extension of the policy laid down in Africa to Asia. The four representatives of the United Kingdom at the two Conferences included two members of the Committee, Mr. R. J. Simmons, the Adviser on Animal Health to the Secretary of State, and Dr. J. Carmichael. The question whether there is any danger of introducing rinderpest into the United Kingdom by the importation of immunised animals or the carcases of immunised animals has received much attention in view of the desirability of increasing the meat supply. It was considered by the African Rinderpest Conference and their resolutions were placed before the Committee. The Committee set up an *ad hoc* Veterinary Sub-Committee to consider whether anything could be done to enable meat to be imported into this country from Africa. They recommended that efforts should be concentrated upon the eradication of the disease from wide areas of country containing large cattle populations.

Research into *Brucella melitensis* problems was first proposed in 1944, and in that year Dr. A. W. Taylor was engaged to carry out the investigation under a Colonial

Development and Welfare scheme which included the building of a special laboratory unit at the Agricultural Research Council's Station at Compton, Berkshire. Since that date the scheme has suffered from an incessant series of delays and the building still is not begun. A recently-submitted report by Dr. Taylor on the work done explains that, while work with *Brucella melitensis* is impossible in the absence of the special laboratory facilities, he has conducted some preliminary work on vaccine strains of the closely-allied *Brucella abortus*. He outlines a future programme of work which must await the completion of the new laboratory.

REGIONAL ORGANISATION OF RESEARCH IN EAST AFRICA

The headquarters of the East Africa Agriculture and Forestry Research Organisation and the joint Animal Husbandry Section of this Organisation and of the East African Veterinary Research Organisation are to be established at Muguga. An area of 1,000 acres, a part of the Muguga forest reserve, is being leased for a period of 99 years. It is situated west north west of Nairobi, 17 miles from the city and ten miles from Kabete. The new alignment of the Kenya and Uganda railway (with Muguga station convenient) and the main trunk road north from Nairobi pass just to the east of the reserve. The headquarters will be built at an altitude of 6,815 feet ; Nairobi is at 5,500 feet and Kabete at 6,210 feet. A Colonial Development and Welfare Research scheme has been made to provide funds amounting to £325,000 for the capital cost of the first phase of the development of the joint headquarters at Muguga and for the laboratories at Kabete for the East African Veterinary Research Organisation. It is estimated that a further sum of the order of £500,000 will be required for the second phase to enable the capital development of the joint headquarters at Muguga to be completed. Approval of the first phase does not imply any commitment in advance to endorse the second, but when the first phase has been completed, any application for funds made for the second phase will be carefully considered.

Of the moneys provided, road laying, the provision of power, light, telephones and water, the erection of offices, library and laboratories and the erection of European, Asian and African housing call for an expenditure of £214,000 and equipment is estimated to cost £61,000. At Kabete buildings are to cost £43,000 and equipment £7,000. This expenditure will enable the two regional organisations to develop over the next five years and works within the first phase of development to be completed.

At Kabete it is planned to develop the Infectious Diseases Research Sections of the East African Veterinary Research Organisation, and the organisation will enjoy the benefits of close proximity with the staff of the Kenya Veterinary Department. At Muguga will be carried out researches on animal husbandry and other problems of animal health. Animal husbandry work will be carried out jointly with the East Africa Agriculture and Forestry Research Organisation.

Research into bovine tuberculosis is being carried out by a research officer equipped with a mobile laboratory which will enable him to pursue investigations of the disease in affected areas in Tanganyika. Other researches will be made at selected experimental stations in the territories, *e.g.*, at Naivasha, Kenya.

In December the Colonial Office received information that the West African Council had generally endorsed the recommendations in the report and had asked that immediate steps should be taken to select and appoint two Directors, one for Agricultural and Forestry Research, and the other for Veterinary Research. It was proposed that the headquarters of the two organisations should be in Nigeria at Ibadan and Vom respectively. Research schemes have been made to provide for the appointment of the two Directors.

VETERINARY SURGEONS ACT, 1948

Supplementary Veterinary Register

The Council of the Royal College of Veterinary Surgeons have directed the Registrar under the above Act to register in the Supplementary Veterinary Register the names of the persons set out below.

It is emphasised that this is the second list of registrations and the absence of the name of any person who has made application in prescribed form before the prescribed date does not imply that such applicant has been refused registration.

The second list consists of persons in whose cases the Council are satisfied that the requirements of the Act have been met.

The date of registration is Thursday, December 15th, 1949.

Further lists of registrations in the Supplementary Veterinary Register will be published from time to time.

Second List of Registrations

Names and Places of Practice

GLOVER, Herbert A., Bywell, South Godstone, Surrey

GROVES, William E., 13, Gladstone Road, Boscombe ; *and* 23, Victoria Road, Parkstone, Dorset.

HAINES, Noel, 48, Lincoln Street, Leicester.

HAMBLIN, Albert E., 217, Dartmouth Road, Sydenham, S.E.26 ; *and* 25, Upland Road, S.E.22.

HAMBLIN, Ruth M. (Mrs.), 217, Dartmouth Road, Sydenham, S.E.26 ; *and* 25, Upland Road, S.E.22.

HANDS, Margery P. (Miss), " The Bungalow," Westington, Chipping Campden, Glos.

HARRISON, John Miles, 63, North Eastern Road, Thorne, Nr. Doncaster ; *and* Rose Cottage, Belton Road, Epworth.

HAYES, Cecil Hurst, 40, Coombe Road, New Malden, Surrey; *and* 100, London Road, Kingston, Surrey.

HAYES, Cecil Naylor, " North Lodge," Kingston Road, Ewell, Surrey; *and* 40, Coombe Road, New Malden, Surrey.

HENSON, Marjorie (Mrs.), 33, Crouch Hill, London, N.4.

HOLL, Ernest, Castle Hill, New Buckenham, Norwich.

HOPKINS, John, 271, Osmaston Road, Derby.

HORN, Cecil N., 11, The Bridge, Wealdstone, Harrow, Middx.

HUGHES, Ivor, 50, High Street, Coleshill, Warwicks; *and* 55, High Street, Saltley, Birmingham, 8.

JONES, Frank Edward, 243, Green Street, Forest Gate, E.7.

JONES, Joyce M. (Mrs.), 162, Ley Street, Ilford, Essex.

KEECH, Stanley C., Ormsby House, Blandford, Dorset.

KENDALL, John F., 254, Priests Lane, Shenfield, Essex.

KING, Francis George, Park Villa, Crudwell, Wilts.

NEWS FROM OVERSEAS

U.S.A.

In Federalsburg, a small town in Maryland, 32 people became ill as a result of *Br. abortus* infection, when a dairy selling raw milk obtained supplementary supplies from two infected herds.

Acute haemolytic anaemia was produced experimentally in dogs as a result of feeding flake naphthalene. The test was carried out to confirm a diagnosis of naphthalene poisoning in four cases of acute haemolytic anaemia in Detroit children. The latter had been sucking moth-balls, which are composed entirely of naphthalene.

Canada

Of 400 human diaphragms examined in Vancouver, 4 per cent. were found to be infected with *Trichinella spiralis*. A fairly high incidence was also found in rats collected in the vicinity of piggeries near Vancouver.

Australia

A poultry farmer at St. Ives, New South Wales, when handling eggs from an incubator, noticed that one was chipped on both sides. From the egg, which weighed only $2\frac{3}{4}$ oz., subsequently came very small twin chicks (Chinese Langshan).

Sardinia

Dr. Gionisio Mura, one of the party of seven Italian veterinarians and agriculturists who recently visited this country, stated that by means of DDT malaria virtually has been eradicated from Sardinia. Formerly, the incidence of this disease had been in the region of 80 per cent. of the population.

Cyprus

The work in Sardinia follows upon that in Cyprus, from which malaria-carrying anopheles mosquitoes were finally eradicated in April of this year. In 1936 the island was described as one of the most malarious places in the world. Ten years later a pilot scheme was tried out over an area of 450 to 500 square miles, with a population of 34,000, of whom every other person was infected. Mosquito breeding places and the interior of buildings were sprayed with DDT, and the results were so successful that total eradication was planned. The larvicides used during most of the campaign consisted of a 3 to 4 per cent. solution of DDT in "gas oil." "Malariol," paris green and simple fuel oil were used on occasions, and during 1948-49 DDT and gammexane smoke were used in accessible places. The total cost of the campaign was about £220,000.

It will be recalled that the warble fly has also been eradicated from Cyprus.

PROGRESS OF TUBERCULOSIS ERADICATION IN WILTSHIRE

Captain J. Fox, Regional Veterinary Officer of the Ministry of Agriculture, told the annual meeting at Devizes of the Wilts branch, National Farmers' Union (states the *Bath Chronicle*), that much progress had been made in Wiltshire during the last two or three years in the eradication of tuberculosis in dairy herds.

In 1938, he said, there were only 100 T.T. herds in the county. To-day there were over 950. Between January 1st and September 30th this year, 133 new licences had been granted, and, since October 1st, there had been a further 144 fresh licences.

If progress continued at this rate Wiltshire would probably anticipate the new attestation regulations, and demand that the county be declared an eradication area.

ROYAL COLLEGE OF VETERINARY SURGEONS

Membership Examinations, December, 1949

LIST OF SUCCESSFUL CANDIDATES

(*Continued from page 858*)

London (*continued*):

FINAL EXAMINATION

Archard, M. V.	Mack, R. M.
Batt, P. R.	Oliver, A. C.
Beresford-Jones, W. P.	Simmonds, D. J.
Bishop, H. W.	Smith, F. R.
Bowen, D. L.	Stanislas, I.
Butler, G. A. F.	Stratton, J.
Clark, M. A.	Tanner, S. C.
Clifford, H. R.	Toop, B. R. V.
Devonald, L. J. R.	Webster, A. A.
Gilbert, G. A.	Whitney, J. C.
Hardy, R.	Widrich, Miss S.
Heynes, M.	Williams, K. R.
Honhold, C. D.	Wootton, J. C.
Hughes, Miss R.	Yeats, J. J.

Liverpool:

SECOND EXAMINATION

Both subjects

Adams, H. S.	Morgan, T. D.
Bailey, Miss E. J. (P)	Morris, J. E.
Barbour, R. L. J.	Mortimer, P. H.
Benson, J. A.	Phillips, G. D.
Booth, F. R.	Pyke, B. N. C.
Bowen, D. T. E.	Stallard, L. J.
*Crowley, A. J.	Wakeem, A. A.
Harding, J. D. J.	Wilson, Rex.
Hedger, R. S.	Wright, G. W.

One subject

Davies, Owen	Lewis, E. O.
Kiernan, N. S.	Makin, Bryan

* denotes 2nd class honours.

(P) denotes credit in Physiology.

THIRD EXAMINATION

Both subjects

Schwarz, R. A. J.	Wannop, C. C.
Short, M.	

One subject

Blackburn, P. W. (P)	Smith, G. S.
Briggs, Miss N.	Stubbs, G. S.
Jones, Ceiriog	Wells, C. F.
Meredith, F. W.	Williams, K. T.
Monk, Miss M.	Woolfenden, Miss E.
Needham, B.	

(P) denotes credit in Pathology.

FOURTH EXAMINATION (old syllabus)

Maydew, E.	Westcott, E. V.
Roberts, Miss E. G.	

FINAL EXAMINATION (old syllabus)

Forster, P. E.	Parkinson, W. G.
Hewett, M. J.	Woodhead, A. T.
Mason, Henry	

Edinburgh:

FIRST EXAMINATION

Baird, R. G.	McKinlay, D. I.
Couttie, M. A.	Spencer, G. A.
Curran, G. D.	Thomson, K. S. (C)
Gilchrist, Miss H. G. R.	Veale, J. C.
Hutton, P. H.	Wilson, H. R.
Kermack, N. R.	

(C) denotes credit in Chemistry.

SECOND EXAMINATION

Bowler, R. K.	McCormick, A. N.
Boycott, B. R.	McCulloch, A. F. (H)
Chew, S. K.	Mitchell, A. W.
Drake, T. J.	Turnbull, J. M.
Hutchinson, H. L.	

(H) denotes credit in Histology.

THIRD EXAMINATION

Adamson, I. W.	Crawford, Miss H. F. (A)
Beck, C. J.	Hildebrand, W. R. P. (A) (H)
Borthwick, R.	Hockenhull, E. W. F.
Brown, T. C.	Jackson, O. F.
Bruce, I. H.	McCallum, Gordon
Butcher, Miss J. P.	Mitchell, H. M.
Campbell, Kenneth	Munro, John (H)
Clark, Miss S. T.	Sanderson, J. F.
Clemo, J. A.	Skowronski, Z.

(A) denotes credit in Anatomy.
(H) denotes credit in Hygiene.

FOURTH EXAMINATION

Argo, Edward	Magowan, J. W.
Butler, M. C.	Minnis, J. S.
Christie, Gordon	Mitchell, J. R.
Condy, J. B.	Ognowski, K.
Cooke, C. D.	Philip, H. M.
Cragg, D. A.	Robson, T. W.
Gibson, W. W. C.	Smith, I. A.
Gittens, J. M.	Waterston, R. F.
Glover, T. D.	Watson, D. A.
Hooper, R. B.	Williamson, P. T.
Madden, D. H. L.	

FINAL EXAMINATION

Auchterlonie, D.	Loxam, J. G.
Birrell, Miss E. E.	Miller, A. H.
Branagan, D.	Nixon, K.
Brooks, C. R.	Raine, W. A. S.
Burns, K. N.	Reid, G. M.
Cormack, J. G.	Stirling, L. R.
Field, John	Wright, C.
Hamilton, H. A.	

(To be concluded)

QUESTIONS IN PARLIAMENT

Veterinary Therapeutic Substances

Mr. PHILIPS PRICE (December 15th) asked the Minister of Agriculture what progress has been made during recent months with regard to the introduction of control of the manufacture of veterinary therapeutic substances; and to what extent arrangements have now been made to lay down adequate standards of purity and strength, respectively, for such products and to provide facilities for testing.

Mr. T. WILLIAMS: A draft order providing for control of the manufacture of veterinary therapeutic substances and prescribing standards and tests of purity is almost ready, and I hope to circulate this draft, within the next few weeks, to representatives of the interests concerned for their comments. Facilities for carrying out check tests of the kind prescribed in the order will be available when the order comes into operation.

. . . . .

Racehorses (Doping)

Mr. JOHN LEWIS (December 15th) asked the Secretary of State for the Home Department if in view of public disquiet he will introduce legislation which will have the effect of making the doping of racehorses an indictable offence.

Mr. EDE: I have no reason to suppose that the practice referred to is of such a nature or is of such proportions as to justify me in proposing legislation adding new offences to the criminal law.

Mr. LEWIS: Has the attention of my right hon. Friend been drawn to a case recently reported in the Press where three trainers had their licences withdrawn by the Jockey Club because the horses in their care were found to be doped, and does not he agree that, if it was an indictable offence, the decision of a court of law would be a factor in determining whether or not the person concerned should be deprived of his livelihood?

Mr. EDE: No, Sir; I do not think that would bind the Stewards of the Jockey Club. As I understand it, the requirement of the Stewards is that the trainer is responsible for the care and health of the horse, and I am bound to say that I think that is a very proper requirement to make.

Mr. EMRYS HUGHES: Is my right hon. Friend taking any special precautions to see that the horse owned by the right hon. Gentleman the Leader of the Opposition is not doped before the General Election, in view of the large quantity of dope in the proximity of the stables?

Mr. EDE: The stables in question are very near to my own place of abode, and I hope that my hon. Friend is making no personal reflection.

Mr. LEWIS: While it is not suggested that the Jockey Club acted wrongly in this matter, surely it is the duty of my right hon. Friend to take into account the position of people deprived of their livelihood without recourse to any appeal whatever?

Mr. EDE: No, Sir. I am not responsible for the employment of these people, nor for the rules under which they work.

. . . . .

Research

Mr. PHILIPS PRICE (December 15th) asked the Minister of Agriculture what surveys have been started by the Agricultural Improvement Council, with a view to making an assessment of what are the most urgent matters calling for research; and what progress has been made in each case.

Mr. T. WILLIAMS: The work of the Agricultural Improvement Council has covered a very wide range of subjects, many of which will be described in detail in the Council's Second Report which it is hoped will be published early next year.

. . . . .

Books and Scientific Journals (Paper)

Mr. COBB (December 12th) asked the President of the Board of Trade what is the present position with regard to the supplies of paper to publishers of scientific books and journals; and what increase has been possible in recent months.

Mr. H. WILSON: All restrictions on the use of paper and books, including scientific works, were removed in March last. Scientific journals dealing with original research have been allowed their full requirements since February, 1948, and the permitted paper consumption of other scientific journals, which has regularly been on a higher scale than that allowed to general periodicals, was increased by 50 per cent. in July last.

. . . . .

Periodicals (Paper Supplies)

Mr. ERIC FLETCHER (December 15th) asked the President of the Board of Trade whether he is now in a position to fix a date at which the present restrictions on magazines and periodicals will be removed.

Mr. H. WILSON: As from March 1st next, existing magazines and periodicals will no longer be limited for their home sales to a percentage of their pre-war consumption of paper, but will be allowed to use all the paper they can obtain. The restrictions on new publications will also be withdrawn.

Mr. FLETCHER: May I thank my right hon. Friend for that reply, which I am sure will be very generally welcomed?

Mr. KENNETH LINDSAY: Will it now not be necessary for magazines to try to arrange for publication abroad, which has caused great inconvenience both to the right hon. Gentleman's Department and elsewhere?

Mr. WILSON: We shall certainly welcome all the efforts which they are able to make to export copies of what is produced but there will now be no question of any necessity to publish abroad.

Mr. ASSHETON: Does the right hon. Gentleman's statement cover newspapers?

Mr. WILSON: It covers what it says, periodicals and magazines, not newspapers.

Mr. FRANCIS NOEL-BAKER: Will the restriction on the amount of paper permitted to be allocated to advertising be removed at the same time?

Mr. WILSON: I should require notice of that question.

. . . . .

University Grants

Mr. COBB (December 12th) asked the Chancellor of the Exchequer whether he will give an assurance that, in connection with the programme of expenditure cuts now under consideration, no steps will be taken to reduce the valuable work at present being undertaken by the universities with the support of the University Grants Committee; and whether, in that connection, he will provide some up-to-date information as to the progress being made with regard to the increased output of qualified scientists and technologists and the extent to which the recommendations of the Barlow Committee are being implemented.

Sir S. CRIPPS: I would refer my hon. Friend to the statement which I made on October 26th with regard to the retardation of the university building programme. I am not proposing any other change in the general arrangements affecting grants to universities. As regards the second part of the Question, the recommendation of the Barlow Committee that the number of university students in science and technology should be doubled has already been implemented.

Handling of Food (Cleanliness)

Mr. C. S. Taylor (December 12th) asked the Minister of Health whether, in view of the model by-laws which he has issued to local authorities in England and Wales to ensure cleanliness in the handling, wrapping and delivery of food, he will make an order giving employers the right to insist on bacteriological examination of employees engaged in these businesses.

Mr. Blenkinsop: I know of no powers under which such an order could be made.

. . . . . .

Dogs (Rabies)

Commander Noble (December 13th) asked the Minister of Agriculture how many dogs underwent the six months quarantine period in the years 1946, 1947 and 1948, respectively; how many suspected cases of rabies were there in each of these years; and how many confirmed cases.

Mr. T. Williams: The figures are given in the following table:—

	1946	1947	1948
Number of dogs placed in quarantine on arrival from abroad	1,929	2,207	1,694
Number of suspected cases of rabies	16	42	22
Number of confirmed cases of rabies	1	3	3

. . . . . .

Fowl Pest

Mr. Hurd (Dec. 16th) asked the Minister of Agriculture to state the recent measures taken to prevent the introduction of fowl pest into the United Kingdom; if a satisfactory explanation has been found to account for the large number of outbreaks which occurred in the islands and coastal districts of Scotland during October; and if he is satisfied, as a result of the recommendations of the British mission which recently visited Hungary, that effective measures are now being taken to prevent infected poultry carcases being sent to this country.

Mr. T. Williams: The sources from which it has been suspected that infected poultry carcases may have been received are Hungary and Poland. As regards Hungary, arrangements have been made with Hungarian authorities whereby poultry carcases sent to Great Britain will be drawn only from areas where all poultry have been vaccinated against fowl pest; and birds affected with fowl pest or which have been in direct contact with affected birds will not be used for supplying the British market. These arrangements (which also include other conditions) should be effective in preventing infected carcases being sent to this country, but as a check, samples for testing at my Department's Veterinary Laboratory are to be taken from consignments as they are received in Great Britain. Very few consignments of poultry have, however, been received since the arrangements were made, and sufficient sampling results are not yet available for the effectiveness of the arrangements to be assessed. As regards Poland, arrangements have been made with the Polish Government for a veterinary mission to visit that country within the next few weeks to endeavour to arrange with the Polish authorities for effective measures to be adopted to prevent the despatch of infected carcases to Great Britain.

There is no satisfactory explanation of the cause of the original outbreaks of fowl pest that occurred in the Orkney Islands (in which imported carcases are not distributed) but the spread of infection to other islands and coastal districts of Scotland is probably due to sea-birds.

NOTES AND NEWS

Diary of Events

Dec. 30th.—Annual Dance, Dumfries and Galloway Branch V.V.B.F. Ladies' Guild, at Dumfries (Cairndale Hotel).

1950.

Jan. 6th.—Meeting of the Southern Regional Group of the Association of Veterinary Teachers and Research Workers, at the Royal Veterinary College, Camden Town, N.W.1, 2 p.m.

Jan. 13th.—R.V.C. Students' Society Annual Ball, Grosvenor House, Park Lane, W.1.

Jan. 18th.—Meeting of the Southern Counties Division, N.V.M.A., at Southampton (Polygon Hotel), 6 p.m.

Next Meetings of Council and Standing Committees, N.V.M.A.

(*Committees at 36, Gordon Square, W.C.*1)

Wednesday, February 8th

11.0 a.m. Parliamentary and Public Relations Committee.
2.0 p.m. Organising Committee.
4.15 p.m. Home Appointments Committee.

Thursday, February 9th

10.0 a.m. Veterinary State Medicine Committee.
2.0 p.m. General Purposes and Finance Committee.

Friday, February 10th

11.0 a.m. **Council Meeting** at the Connaught Rooms, Great Queen Street.

* * * * *

Colonial Veterinary Service

The Overseas Services Committee of the N.V.M.A. suggested to the Colonial Office early this year that recruitment to the Colonial Veterinary Service might be assisted if provision were made to enable a gratuity to be paid to an officer who may wish to retire before completing the normal period of service.

A reply was received dated April 8th and the Colonial Office have now agreed to the following excerpt from their letter being published for the information of members of the profession:—

"There is an arrangement of long standing that Governments of tropical African Colonies permit Medical Officers to retire with gratuities of £1,000 or £1,200 after nine years or 12 years' service, but it is very rarely that any Medical Officer avails himself of this arrangement. The arrangement does not apply to other Colonies.

"I am to add in this connection that most Colonial Governments are prepared to engage Veterinary and other officers on contract terms which provide for the payment of a gratuity after an agreed period of service. An officer serving on contract terms may if he wishes apply for a permanent and pensionable appointment. An officer appointed to a permanent and pensionable post while serving on contract is allowed to count the whole of his previous service under contract as pensionable service in return for relinquishing his right to gratuity under the contract. The rate of gratuity paid by most Colonial Governments is £25 for each completed period of three months' service (including approved leave) or at the rate of £37 10s. for each three months of service on a salary of £1,000 a year or more. There is some variation from this arrangement in some of the East African territories, where the gratuity is at the rate of 15 per cent. of 9/10ths of emoluments received during the period of contract service."

* * * * *

PERSONAL

Appointments in the Colonial Veterinary Service.—The following appointments are announced: Mr. S. G. Wilson, Senior Veterinary Research Officer, Uganda, to be Chief Field Zoologist, Kenya; as Veterinary Officers—Messrs. D. F. Hamilton (Cyprus), J. D. Rennie (Nyasaland), J. G. Ross (Cyprus) and M. M. Scott (Northern Rhodesia).

. . . . . .

Conferment of Cambridge Degree.—At Cambridge, on November 26th, at a congregation of the Senate, the degree of Ph.D. was conferred upon Mr. John Jaques Bullen, M.R.C.V.S., of Duck End, Dry Drayton, Nr. Cambridge. The title of Mr. Bullen's thesis was "A study of *Cryptococcus farciminosus* (Rivolta)."

. . . . . .

Birth.—M'Call.—On November 13th, 1949, at Armagh, to Elizabeth Muriel, wife of J. M'Call, M.R.C.V.S., a son—David Lloyd.

* * * * *

R.C.V.S. OBITUARY

Barber, George Henry, M.B.E., Pastoral, Thorne Park Road, Chelston, Torquay. Graduated London, July 16th, 1901. Died December 8th, 1949; aged 73 years.

V.V.B.F. LADIES' GUILD: COUNTY OF AYR DIVISION

On Wednesday, November 23rd, a dance organised by the County of Ayr Division of the V.V.B.F. Ladies' Guild was held at Western House, Ayr, when a large representation of the veterinary profession, with friends, was present. The function was voted a great success and many of those participating expressed the hope that it would be repeated next season.

Dance prizes, kindly donated by Mrs. R. M. Smith, Galston, Mr. D. Graham, M.P.S., Prestwick, and Messrs. May & Baker, Ltd., added materially to the evening's enjoyment and were much appreciated by the winners.

A luncheon set, presented to the Guild by Mrs. Q. A. Stewart, was raffled and realised the sum of £16.

As a result of this most successful dance, Mrs. Stewart, on behalf of the Ayrshire Ladies' Guild, has forwarded to Mrs. W. M. Mitchell, organiser for Scotland, a cheque for £115 7s.

* * * * *

THE WELSH NATIONAL VETERINARY SCHOOL PROPOSAL

At the annual meeting of the Court of the University of Wales, held at Bangor on December 13th, the Pro-Chancellor, Lord Harlech (states the *Western Mail*), reporting on a meeting of the council's deputation with the University Grants Committee which discussed the possibility of carrying out the recommendations contained in the report of the committee appointed by the court to prepare a scheme for veterinary education in Wales, said that the committee were by no means unfriendly and the meeting had been most useful. The deputation learnt, however, that the committee had long been committed to the establishment of new veterinary faculties at Cambridge and Bristol. The Welsh scheme would have to be considered against that background, but if the University were to make a case for a definite scheme it could be included in the plans for 1952-57: there were no hopes of getting anything before then.

It was quite clear that the committee attached the greatest importance in any scheme for a Welsh Veterinary Faculty that, at least in the pre-clinical years of training, the students in that faculty should be a corporate part of one of the existing colleges and should share the life of the undergraduates of other faculties. It would not be a separate institution built out in the blue. It would be up to the Welsh University to decide which of its colleges would be the sponsor and main locus of the Welsh National Veterinary School, and it would be the responsibility of the council to resummon the veterinary committee to work out a more definite plan.

"I am not discouraged and we can persevere," said Lord Harlech.

Mr. Brynmor Anthony suggested that as similar precedents had been set up in the spheres of theology and medicine it might be possible to proceed with a veterinary course, using the present agricultural facilities which would give part exemption for the completion of the diploma course elsewhere.

* * * * *

THE B.M.A. AND PROPRIETARIES

"The unwillingness of the B.M.A. Council to allow the committee on proprietary medicine advertising* to proceed with the preparation of a report on the manufacture and sale of proprietary medicines is understandable," writes "Onlooker" in *The Pharmaceutical Journal*, and continues: "To a great extent the subject is *ultra vires* to such a committee, and there is little evidence to-day that any enquiry into the preparation of these medicines would serve any useful purpose, but the control of advertisements is an entirely different matter. Even if it be accepted that self-medication by the public is ineradicable, the public should be protected—as the report rightly admits—from its dangers. It is doubtful, however, if such protection can be obtained solely by the good-will of those whose livelihood depends upon promoting the sale of the medicines from which the public are to be protected. For more than 40 years the control of the sale and advertising of proprietary medicines has been under consideration by the B.M.A. and by the Pharmaceutical Society, and, while this latest approach by the B.M.A. may go some way towards an improvement, it still leaves a lot undone. How is the next move to be made—by a voluntary organisation or by State intervention?"

* *Vet. Rec.* **61.** 843.

* * * * *

UNIVERSITY OF EDINBURGH DEGREE OF B.Sc. (Vet. Sci.)

At the Graduation Ceremonial of the University of Edinburgh held on December 16th, the following students of the Royal (Dick) Veterinary College had the Degree of B.Sc. (Vet. Sci.) conferred on them: Brooks, Christopher Ralph; Burns, Kenneth Ninian, and Nixon, Keith.

ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

SHEEP SCAB:

Cumberland.—Taw House, Boot, Holmrook (Dec. 7th); West Head, Wythburn, Keswick (Dec. 12th); Field Head Farm, Eskdale, and Lowkinmont, Bootle, Bootle Station (Dec. 14th).

West Yorks.—Embsay Moor, Embsay, Skipton (Dec. 12th).

Yorks (W.R.).—Carr Farm, Barnoldswick, Colne, Lancs (Dec. 15th).

* * * * *

SHEEP WASHING CONTROL RECOMMENDED

A revision of the Rivers Pollution Prevention Act, 1876, is recommended by the sub-committee of the Central Advisory Water Committee. In its report issued this week the sub-committee (reports the *Farmers' Weekly* in its issue of December 16th) recommends that River Boards should be empowered to make by-laws, subject to confirmation by the Ministry of Health, to control the washing of animals in any part of a stream if they consider it is likely to be harmful to the stream.

"Sheep washing," says the report, "would chiefly be affected, and the N.F.U. maintained that the practice—which must not be confused with sheep dipping—is not harmful; this was generally agreed.

"Some difficulty has been experienced by Fishery Boards and other authorities through waste sheep dip being allowed to escape into streams, and it was suggested that River Boards should be able to control the siting of sheep-dip places.

"We do not think it practicable to provide that River Boards should receive notice of dipping, nor would it be an effective control because, in the case of some parasites, dipping must be undertaken as soon as the infection is discovered."

The committee says, "We make no recommendation about sheep dipping. We assume that the danger of disposing of sheep dip into streams will continue to be brought to the notice of farmers, most of whom in their own interests will take the necessary precautions. If they fail to do so the River Board can have recourse to their powers to take proceedings."

* * * * *

The Film "Sterility in Dairy Cattle."—The many members of Divisions, N.V.M.A., who have seen this film, which emphasises the progress made by British veterinarians in the field with which it deals, will learn with interest that, following the award of first prize in the veterinary category at the 10th International Festival of Cinematic Art, held in Venice, it was included in a programme of first prize winning British specialised films shown to an invited audience in London recently by the Association of Specialised Film Producers. The description of the film was as follows: "The film, intended for use by veterinary surgeons, farmers and other agricultural audiences, shows the course of a normal, healthy birth of a calf, and then describes the defects or disease in cows or bulls which may lead to widespread sterility in a dairy herd and to a consequent drop in milk production. Advice is given on the prevention of certain diseases and what steps should be taken to bring the herd back to normal health. This film demonstrates vividly the enormous value of a healthy cow, which by producing a calf every year is almost continually providing milk."

Another I.C.I. specialised film, "Control of Infection in Surgical Dressings," received second prize in the Medical Section at the Festival.

* * * * *

Scientific Films Census.—In connection with the information service of the Scientific Film Association, a national survey is being made of makers, owners and users of scientific and similar films. Although information has already been collected from over 400 scientific film makers and distributing agencies, there may be others whose names and films are known only to a limited number of people. The Association asks for particulars of films not at present listed. Details should be sent to the Secretary, 4, Great Russell Street, London, W.C.1.

* * * * *

New laboratories for the department of soil fertility will relieve congestion at the Macauley Institute of Soil Research. It is now possible to accept research workers from Australia, South Africa, Italy, Chile and Switzerland.—*Farmer and Stock-Breeder.*

Trivia

AN OUT-DATED WARNING

Recently received by a well-known practitioner from, he surmises, a foreign graduate:—

Uterine Inertia: Calcium

When you write a full account of this please include a warning that the injection must not be particulate and should be *dissolved* or filtered, and should be given slowly.

I killed a most beautiful bitch (the best of her breed and my favourite) and her five puppies through giving a particulate suspension of *Ca. gluconate* (not boro)—she died of oedema of lungs in 20 minutes and puppies were dead of same inside her. An assistant stated that the injection was just as we had used before when I raised question of its solubilisation.

I hate to be reminded of the poor bitch and so remain,

Your Anonymous Correspondent.

. . . . . .

HEARD AT A DIVISIONAL MEETING

During discussion of a case of external ear disease the word "canker" was used.

A Member: "Would Mr. —— kindly define the word "canker"?

Another Member: "Canker is something which, after a few years, enters into the soul of every veterinary surgeon."

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

MONILIASIS IN TURKEYS IN GREAT BRITAIN

Sir,—Mr. J. E. Wilson, in his letter which appeared in the issue of November 26th (*Vet. Rec.* **61.** 806), draws attention to an apparent error in the report of the research work at the Poultry Research Station of the Animal Health Trust in that the condition moniliasis in turkeys, which is now under investigation, was recognised by him more than 15 years ago. We would point out that it has not been claimed by us that the disease was first recognised at the Poultry Research Station, but that it is now being reported for the first time in this country. An article to this effect was submitted for publication to *The Veterinary Record* prior to the date of Mr. Wilson's letter and an abstract of it was included in the Third Annual Report of the Animal Health Trust issued last week.

Mr. Wilson admits that no publication was made by him at the time, and in any future publications we will have pleasure in referring to his letter claiming priority of recognition of the condition in Great Britain.

We would respectfully suggest that publication should have been made at the time, since although the occurrence of the disease in the United States of America had been recorded, few British veterinary surgeons are likely to refer to the Proceedings of the World's Poultry Science Congress. It is only by such reports in our own journals that the busy practitioners with little access to scientific literature are likely to be kept informed of the appearance of new diseases.

Further, we cannot agree with Mr. Wilson that the disease is of relatively little importance. In the outbreak investigated by us approximately 1,000 turkeys had succumbed during one rearing season, and there is evidence of a number of subsequent outbreaks in England. The disease is probably much more widespread than at present believed. The turkey industry is not organised to the extent of the poultry industry, and proportionately relatively very few specimens are ever received at laboratories for examination. The turkey population in certain parts of England is high and the mortality rate often serious. Yet, apart from blackhead, few diseases of turkeys have been investigated. A survey of the diseases responsible would be most valuable. Not only do we believe that the disease fully justifies further research, but we find that mycologists are extremely interested in the condition.

Yours faithfully,

The Animal Health Trust, R. F. GORDON.
232-235, Abbey House,
Victoria Street, London, S.W.1.
December 1st, 1949.

* * * * *

PENICILLIN IN THE CONTROL OF SWINE ERYSIPELAS

Sir,—In reference to your note regarding the treatment of swine erysipelas with penicillin, I have found a combination of serum and penicillin to be more effective in this condition than when either preparation is used alone. The doses of penicillin mentioned would appear to be very small. I have found 400,000 or 500,000 units a suitable dose for an adult store pig or sow and have frequently given 1,000,000 units to sows with this disease with good results. These doses are expensive but results justify their use, and repetition is, as a general rule, unnecessary. The penicillin is dissolved in a small quantity of sterile water in a 50 c.c. syringe which is then filled with serum. Giving both agents together prevents the trouble of getting more than one injection into nervous animals.

Yours faithfully,

Mill Street, Monaghan. J. B. CONLON.
December 12th, 1949.

. . . . . .

Sir,—In *The Veterinary Record* of December 10th you asked for practitioners' views on the use of penicillin in the treatment of swine erysipelas.

For the past 18 months we have been using an oil-wax suspension, containing 125,000 units of penicillin per c.c. in ethyl oleate, as our routine treatment for erysipelas. The dosage used is 1 to 3 c.c. with 4 c.c. for a very large boar. Results have been at least as satisfactory as with swine erysipelas serum and a second dose has not been given in any more than 1 per cent. of the cases treated.

Yours faithfully,

The Vineyard, Abingdon, Berks. K. E. BROWN.
December 16th, 1949.

. . . . . .

Sir,—With reference to the request for the experience of general practitioners in the use of penicillin therapy for swine erysipelas, we should like to submit our opinions.

We like to begin treatment early, *i.e.*, where symptoms are disinclination to eat or stand up, accompanied by a high temperature. In such cases a dose of 400,000 units repeated in 24 hours, to store pigs of 7 to 12 score, has given uniformly good results with no relapses.

Where skin lesions have been evident several days before treatment, dosage may have to be continued for a day or two longer; and only in one such case, this year, have the joints been affected after treatment.

In our opinion penicillin is a more effective remedy than the serum, being quicker acting, easier to inject, and followed by fewer chronic cases.

Yours faithfully,

W. R. CHESTER.
BRENDA G. GEE.

St. Eloy's, Farley Road,
Malvern Link, Worcs.
December 16th, 1949.

. . . . . .

Sir,—*Re* the correspondence on treatment of swine erysipelas with penicillin, I have had the spectacular results mentioned by Mr. Forrest on numerous occasions during last summer and the previous winter. The dose of penicillin varied from 100,000 to 500,000 units for the 8 to 9 score pig.

I have found, however, an alarmingly high incidence of chronic arthritis occurring about six weeks to three months after the date of administration.

Use of serum and penicillin in combination would seem to avoid this disadvantage, while giving a quicker result than serum alone.

Yours faithfully,

D. H. MONAGHAN.

Station Road, Baschurch.
December 17th, 1949.

* * * * *

ILLNESS IN HUSKIES

Sir,—To the meeting of the Central Veterinary Society, of December 1st last, Mr. C. E. Woodrow, M.R.C.V.S., gave an account of his preliminary investigation at a quarantine station of the illness of some huskies from the Falkland Isles. His communication has been published in your journal of last Saturday, page 821. It would seem that Mr. Woodrow's search for a hypothetical virus and its curative treatment have not been successful and he has invited the suggestions of his colleagues. I suggest that he might exclude the possibility of the illness being due to the conjoint infection of the *Beta haemolytic streptococcus* and bowel parasites. An account of this widely prevalent infection and its successful preventive and curative treatment was published in the *Brit. Vet. Jour.* (1949.) **105.** 4.

Yours faithfully,

529a, Finchley Road, London, N.W.3. TOM HARE.
December 14th, 1949.